

**Draft
Environmental Impact Report/
Environmental Assessment**

**State Route 138 Widening Project
From Avenue T to State Route 18
Junction Through
the Communities of Littlerock,
Pearblossom, Llano and the City of
Palmdale**

SCH Number: 1998091007



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5.0 Section 4(f) Evaluation

U.S. Department of Transportation Act Section 4(f) Evaluation

State Route 138 Highway Widening

Project in Los Angeles County, California

State of California Department of Transportation

And

U.S. Department of Transportation

Federal Highway Administration

Pursuant to 42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

September 2000

5.1 Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 prohibits the Secretary of Transportation from approving any program or project which:

...requires the use of any publicly owned land from a public park, recreation area, or wildlife or wildlife and waterfowl refuge of national, state, or local significance as determined by federal, state, or local officials having jurisdiction thereof, or any land from an historic site of national, state, or local significance as so determined by such officials unless

There is no feasible and prudent alternative to the use of such land, and

Such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use....

(Department of Transportation Act of 1983, 49 U.S.C. Section 21)

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate other federal agencies, in developing transportation projects and programs, which use lands, protected by Section 4(f).

5.2 Proposed Action

The California Department of Transportation (Caltrans) proposes to widen State Route 138 from 2 to 4 lanes on the segment of the highway, which goes through the communities of Pearblossom, Littlerock, Llano and the City of Palmdale, all within unincorporated Los Angeles County. The project involves widening along State Route 138 between Avenue T to the west and the Los Angeles/San Bernardino County line to the east. The preferred alternative involves the addition of one lane in each direction in order to make the existing highway a standard 4-lane conventional highway (for additional information see Section 1.0 in the EIR/EA). A more detailed description of the proposed project can be found in Section 1 (purpose and need) and Section 2 (Alternatives) of this document.

5.3 Description of Section 4(f) Properties Directly Used

5.3.1 Historic Resources

The historic archaeological site resource described below is identified in the Area of Potential Effect (APE) for the proposed Route 138 widening project.

Llano Del Rio Colony Historic Archaeological Site

The Llano Del Rio Colony Historic Archaeological site encompasses a 2095 acre area of the Antelope Valley and is bisected by the Pearblossom Highway (State Route 138) as shown on Figure 2 and Figure 9. Figure 3A shows the Llano Hotel in a northerly direction situated approximately 46 meters (150 ft) from the highway. Figure 16B is a picture taken in the southerly direction facing away from the Llano Hotel into the core area of the colony. Access to the property is not restricted, but traffic studies done show that the speeds in this area are between 65-70 miles per hour. The lack of signs and vehicles traveling at a high rate of speed combine to prevent the commuter from realizing that there is a California Historical Landmark

in such a remote area. Based on these two factors usage/visitation of this 4(f) resource is nearly nonexistent.



FIGURE 16A VIEW OF LLANO DEL RIO HOTEL ON NORTHSIDE OF STATE ROUTE 138



FIGURE 16B VIEW OF CORE AREA OF LLANO COLONY SOUTH SIDE OF STATE ROUTE 138

While little standing evidence of the colony remains, a number of key landmarks survive as visible ruins on the flat plain northeast of Big Rock Creek. At the center of the core area and highly visible from State Route 138 are ruins of the Llano Hotel, men's dormitory, and post office/business office complex. The hotel ruin is arguably the most important structure at the colony by virtue of the diverse social and political activities held there. See Figure 16C.



FIGURE 16C LLANO HOTEL (APPROX. 46 M (150 FT) FROM THE HIGHWAY)

At the north end of the core area are the ruins of the large barn, above ground pool/cistern, and root crop storage structure.



FIGURE 17 ROOT CROP STORAGE STRUCTURE (APPROX. 411 M (1340 FT) FROM HIGHWAY)

A masonry silo, smaller barn, and an adjacent stone building mark the southern limit of the core area.



FIGURE 18 MASONRY SILO, SMALLER BARN (APPROX. 716 M (2350 FT) FROM HIGHWAY)

5.4 Impacts on the Section 4(f) Property

An avoidance alternative was not considered a viable option for the highway-widening project due to the large detour that would be required to go around the enormous historic property. A detour of that magnitude would greatly increase project costs, travel distance, and travel time. The Llano Site consists of a variety of property owners. According to the Los Angeles County parcel assessor maps about 75 parcels are listed as vacant desert land, 3 are government owned land and 12 are single family residents. The County of Los Angeles Department of Parks and Recreation owns one of the parcels. Because the Llano Colony site is so extensive, there is no practical way to completely avoid the site. Personal contacts with members of the Big Pines and West Antelope Valley historical societies resulted in a meeting on July 15, 1999 to discuss project effects on the colony and ways those impacts might be reduced. Members of both groups were concerned about the proximity effects on the Llano hotel ruins, which is one of the most visible and significant surviving built elements at the Llano site. Instead of encroaching on this ruin, these interested parties suggested expanding the highway exclusively on the south side of the existing alignment.

5.4.1 No Build Alternative

The no build alternative has the least potential to affect the National Register eligible Llano site. However, this alternative fails to address the project objectives by not providing the necessary improvements for the projected safety and traffic conditions in the area. There have been a high number of fatalities along this segment of State Route 138. Hence, safety concerns stemming from use of the congested two-lane highway would not be addressed and no additional capacity would be provided. Flooding and debris accumulation would continue to be persistent safety problems. For this reason the No Build Alternative completely fails to meet the project's purpose and need and is dismissed.

5.4.2 Design Variation A

This alternative would expand the highway primarily on the south side within the existing highway right-of-way (ROW) in the core area of the Llano site and would then gradually curve back to follow the existing centerline on either side of the core. Design Variation A would increase the highway from two to four lanes, providing increased carrying capacity and addressing a selected range of safety problems. This alternative would address the problem of unsafe passing by offering an extra lane in each direction of travel.

The ROW for this alternative would encroach about 6.5 meters (21 feet) closer to the standing ruins of the Llano Hotel and single men's dormitory, although the new edge of pavement would not move any closer to the ruins. Instead, the expanded ROW would be used to manage periodic flooding incidents consistent with existing maintenance practices. That would involve periodic grading to remove the buildup of debris and facilitate drainage. Design Variation A would directly impact 22 known archaeological features. Many of these features, particularly building pads, pit features, and refuse scatters can be expected to contain information that would help address important questions in history.

The reasons for dismissing Design Variation A stem from its failure to address several important safety concerns spurring development of this project. While less impacting to the Llano site than either of the viable project alternatives (design variations B and C), this alternative fails to meet the basic purpose and need of the project because it would not address several important safety issues including the currently inadequate sight distance caused by the undulating profile of the existing at grade facility, periodic flash flooding, and debris accumulation.

The existing pavement profile in the vicinity of the Llano colony site is a rolling profile that follows the existing grade, with some deep depressions originally designed to accommodate the passage of flush drainage flows. The dips and deeper depressions along this stretch have the effect of reducing the stopping and passing sight distance available to the user. Adequate sight distance is one of 13 mandatory controlling design criteria elements required in the design of highway facilities. The corrective measure for this condition is to raise the roadway profile, as needed, to eliminate the dips and smooth out the profile. Design Variation A fails to correct the vertical alignment deficiencies discussed above.

About 9 percent of the accidents on this stretch of highway are associated with wet pavement conditions. Design Variation A would not improve existing drainage conditions, continuing to allow flood waters, rocks, and other debris to flow over the roadway. Accidents due to flooding events would increase in number and severity if this alternative were selected because drivers would not expect to encounter such conditions on a multilane highway and would be travelling at greater speeds. For all of the foregoing reasons, Design Variation A does not meet the basic objectives of the project and has been dismissed.

5.4.3 Design Variation B (Preferred)

This alternative would expand the alignment to the south to avoid impacts to the Llano del Rio Hotel ruin and gradually curve back to follow the existing centerline on either side of the core area. The new alignment would shift to the south by approximately 6 m (19.7 ft) just east of 165th Street East and would continue east until it rejoins the existing highway west of 175th Street. This alternative would be elevated about 1.5 meters (5 feet) in the vicinity of the Llano hotel in order to address drainage requirements for a 25-year flood event. It would also have a total width of 68-meter (233 feet) to accommodate required fill, and a series of 82 culverts and drainage channels that will be needed along both sides of the highway.

This alternative meets the project purpose and need, albeit below normal drainage design standards. This design would directly impact 42 archaeological features. Most of these features, particularly building pads, pit features, and refuse scatters can be expected to contain information that would help address important questions in history.

The elevated design would also create indirect effects associated with the introduction of a modest structure in the middle of the site. By truncating the view across this broad, flat cultural landscape, the ability to appreciate the scale and layout of the former settlement would be diminished. The elevated view from the structure would also make the features of the colony more visible in angled light, possibly causing an increase in looting activities. However, an elevation of the highway profile along the highway would accommodate

drainage requirements and eliminate the rolling profile thereby improving the stopping sight distance and reducing the number of fatal cross-median accidents.

Design Variation B appears to be the least damaging choice among the two viable alternatives and is thus considered the preferred alignment. Design Variation A and the No Build alternative, while they would have fewer or no harmful effects on the Llano site, are not viable because they fail to address the fundamental safety and congestion problems prompting development of this project. Some of the adverse effects of Design Variation B can be reduced in severity through the implementation of mitigation measures summarized Section 5.6.2.

5.4.4 Design Variation C

Design Variation C would diverge from the existing alignment at a point just east of 165th street and then run parallel to it some 120 meters to the south until it rejoins the existing alignment east of 175th street. It would be elevated 4.6 meters (15 feet) to accommodate large culverts and have an average width of 88.39 meters (290ft). This alternative would achieve a maximum elevation of 15 feet above the existing grade with a slope at a gradient of 1:6 to address a 100-year flood event. As a result, it would directly impact more archaeological features. A total of 53 features would be wholly or partly destroyed if this alignment is chosen.

In addition, Design Variation C would entail an even more massive and imposing structure than Design Variation B, causing indirect effects of the same types already discussed. Although Design Variation C is farther from the standing ruins at the center of the former colony, the massive scale of this elevated structure would be much more intrusive than the other build alternatives. It would also impact more features and may have a greater tendency to enhance the visibility of the site, potentially resulting in increased looting. These factors suggest this alignment would have the most potential to harm the significant values of the Llano site.

5.5 Avoidance Alternatives

5.5.1 No Build Alternative

This alternative retains the existing roadway conditions. It was rejected for the following reasons.

- It is not consistent with the long-term objective of reducing congestion and improving the overall operation and safety for State Route 138.
- It would not provide sufficient capacity for projected 2024 traffic volumes.
- It would not improve safety conditions or reduce the number of accidents and fatalities.
- It would not facilitate the efficient movement of goods and services through the area.
- It would not complete the planned integrated regional transportation network between San Bernardino County and the Eastern Los Angeles County.

- It would be inconsistent with the 1990 STIP that allotted funds for Passing Lanes, Widen Bridge, and Channelization.
- It would not conform to the Air Quality Management Plan (AQMP)

This alternative would not solve existing transportation safety or maintenance problems. While this project would have no impact on the section 4(f) property, it does not address the project objectives.

5.5.2 Avoidance Alternative

Llano Colony Site

Because the Llano Colony is so extensive (2095 acres), there is no practical way to completely avoid the site. Routing the highway around the site would substantially increase project costs and would also increase travel routes and travel time, resulting in concomitant reductions in air quality. Also, the new location would result in substantial adverse social, economic and environmental impacts including such impacts as extensive severing of productive farmland, displacement of a substantial number of families or businesses, serious disruptions of established travel patterns, substantial damage to sensitive species habitat. See Figure 19.

5.6 Measures to Minimize Harm

The general approaches that would be used to mitigate adverse effects to the Llano Colony are described in this section. That plan proposes treatment measures designed to address adverse effects on the full range of the values that qualify the Llano Colony for the National Register of Historic Places. The values that would be affected include the loss of significant data relative to Criterion D and diminishment of the integrity of the colony as a cultural landscape relative to Criterion A. To address the loss of these diverse values, an integrated program of historical and archaeological investigation, interpretation, and public involvement is planned. The goal of this work would be to gain a more complete understanding of the scope, layout, and characteristics of the colony as a whole and to recover important information that would be lost or diminished as a result of project implementation.

5.6.1 Mitigation Measures for Llano Colony Site

To prevent inadvertent damage to the portions of the Llano Colony site that lie outside of the proposed ROW, the site will be designated and managed as an Environmentally Sensitive Area (ESA). Prior to construction, the ESA will be specifically described in the plans, specifications, and estimates prepared to guide the construction effort. Monetary penalties will be specified for ESA transgressions. Permanent fencing and vehicular gates will be installed as the first construction activity along this section of the highway. These fences will extend along the north and south ROW boundary lines from 165th Street to 175th Street through the former urban core of the community. Vehicular gates will be placed to allow access to existing private dirt roads. Upon completion of the construction project the local maintenance supervisor will review the location of the permanent ESA with a Caltrans archaeologist.

Further coordination with SHPO, FHWA and experts in the history of Llano will result in a Memorandum of Agreement that would stipulate a revised treatment plan and any other

potential measures that would reduce the impact of the highway widening project upon the Llano del Rio Colony site.

The general approaches that would be used to mitigate adverse effects to the Llano Colony site proposes treatment measures designed to address adverse effects on the full range of the values that qualify the Llano Colony for the National Register of Historic Places. The values that would be affected include the loss of significant data relative to Criterion D and diminishment of the integrity of the colony as a cultural landscape relative to Criterion A. To address the loss of these diverse values, an integrated program of historical and archaeological investigation, interpretation, and public involvement is planned. The goal of this work would be to gain a more complete understanding of the scope, layout, and characteristics of the colony as a whole and to recover important information that would be lost or diminished as a result of project implementation. Caltrans staff will initiate a separate environmental enhancement and mitigation grant application for within Caltrans Right-of-way at the Llano Hotel Site.

5.7 Other Properties Evaluated Relative to the Requirements of Section 4(f)

The purpose of this discussion is to address section 4(f) requirements relative to other park, recreational facilities, and historical properties within approximately one-half mile (0.8 km) of the study area. Due to the remote/rural location of the Llano del Rio Colony site and Shady Bend Park there are no other 4(f) properties within one-half (0.8-km) of any of the project alternatives.

5.8 Section 6(f)

There has been no use of Land and Water Conservation Funds in the acquisition or development of Llano Colony.

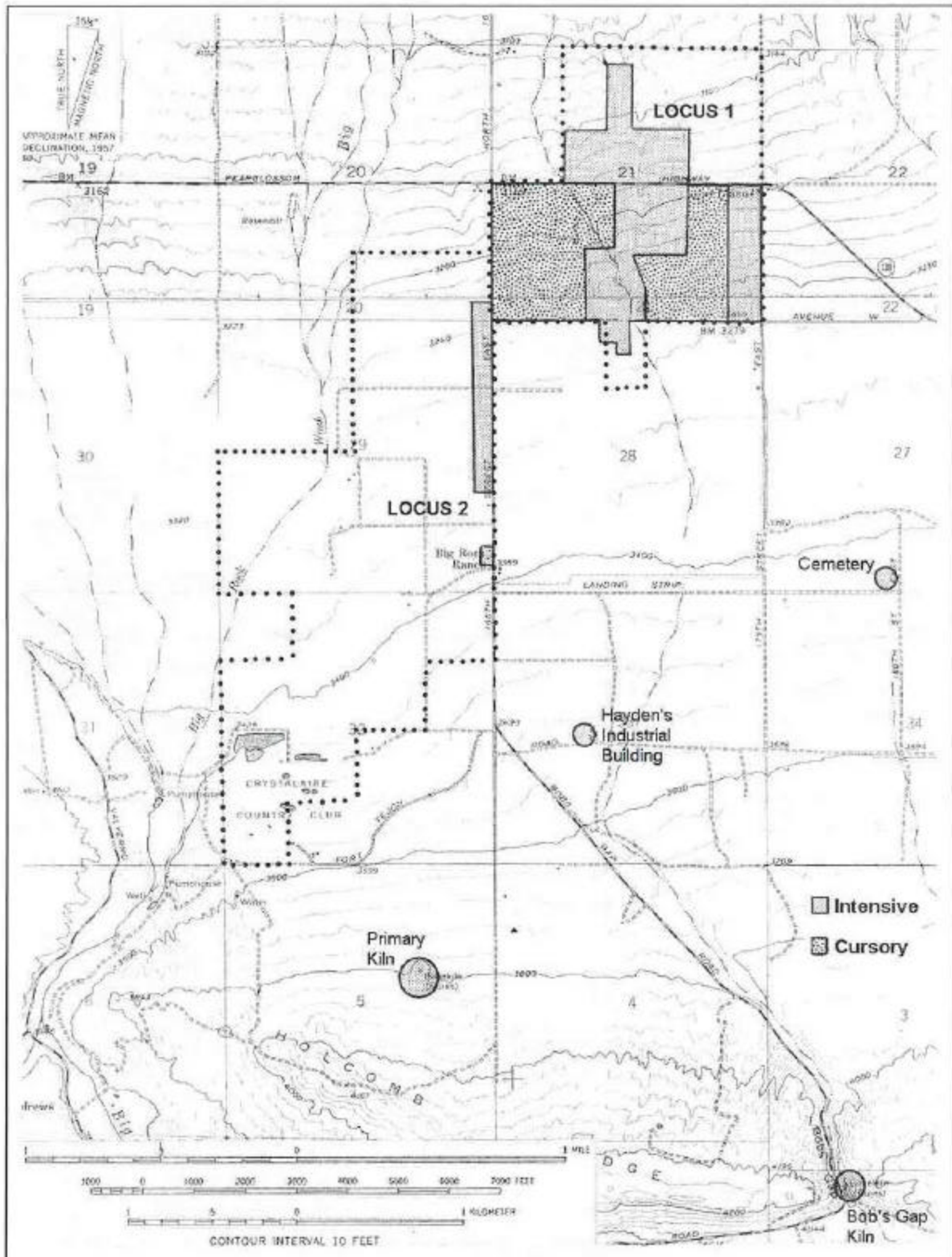


FIGURE 19 BOUNDARIES OF THE LLANO DEL RIO COLONY (BLACK DOTS)

5.9 Coordination

A 30-day scoping period was allocated to ensure that all concerns were presented to the department for consideration and inclusion in the environmental studies. A scoping meeting was held on August 26, 1998 to address any initial concerns prior to design and development of the project. Members of the Big Pines Historical Society expressed concerns about the project effects on the Llano site. An additional meeting was held with members of the Big Pines and West Antelope Valley historical societies on July 15, 1999 to discuss project effects on the colony and ways those impacts might be reduced.

Members of both groups were concerned about proximity effects on the Llano Hotel ruin, one of the most visible and significant surviving built elements. Instead of encroaching on this ruin, these interested parties suggested expanding the highway exclusively on the south side of the existing alignment and installing fencing along the north side of the highway to limit access to the ruin. Design Variation A was initially proposed in response to these suggestions and Design Variations B and C were later developed to move the expanded highway even farther away from the hotel.

Caltrans cultural resources experts also had personal and telephone contacts with individuals knowledgeable about the Llano Colony and heard similar concerns from those parties. Personal contacts were made with Felice Abodaca, Ralph Bowman, Jasper Kidd, and other members of the Big Pines Historical Society, as well as Milt Stark, Cora and James McCrumb, Jim Pledger, David Earle, and Dana Hicks of the Western Antelope Valley Historical Society. Dr. Robert Hine, a historian who has written extensively about western utopian communities including the Llano cooperative, was also contacted by email and expressed his wish that the colony be mapped and recorded to ensure project effects are adequately considered.

In a letter sent on April 21, 2000, the Office of Historic Preservation determined that the Llano del Rio Colony is eligible for the National Register of Historic Properties under Criterion A and D. There is not sufficient evidence at this time to support the eligibility in the areas of economic practices and social behavior. Significance under Criterion A and D is sufficient to establish Llano del Rio as a historic property for the purposes of Section 106 consultation.

Public views on the proposed project have also been sought through numerous additional meetings, telephone conversations, and email exchanges with interested parties.

General public meetings were held on June 10, September 8, and December 15, 1999 with the Highway 138 Safety Corridor Task Force and another general public meeting took place March 9, 2000 in connection with a Littlerock Town Council Meeting. Those venues produced no specific comments about the treatment of the Llano Del Rio Colony site or Shady Bend Park.